Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of Part 25 of the	)	
Commission's Rules to Establish Rules	)	
and Policies Pertaining to the Second	)	
Processing Round of the Non-Voice,	)	IB Docket No. 96-220
Non-Geostationary Mobile Satellite	)	
Service	)	

To: The Commission

COMMENTS OF THE ASSOCIATION OF AMERICAN RAILROADS

The Association of American Railroads ("AAR"), by its undersigned counsel, hereby submits its Comments in response to the Commission's Notice of Proposed Rulemaking ("NPRM") in the above-captioned proceeding, released October 29, 1996.[1/]

In this proceeding, the Commission is undertaking to license systems in the second processing round for the non-voice, non-geostationary mobile satellite service ("NVNG/MSS"), also referred to as the "Little LEO" satellite service, which uses constellations of low-earth orbiting (LEO) satellites to provide commercial radiolocation and two-way data messaging services.

1/ By Order released November 27, 1996, DA 96-1989, the International Bureau extended the filing deadline for comments to December 20, 1996, and for reply comments to January 13, 1997.

AAR's interest in this proceeding is limited to the issues raised at paragraph 78 of the NPRM, in which the Commission requested comment on possible Little LEO use of additional uplink spectrum that was allocated for the Little LEO service at the 1995 World Radiocommunication Conference (WRC-95), and the appropriate use of any additional Little LEO spectrum that might be secured at WRC-97.[2/]

The railroad industry in the United States makes extensive use of mobile communications frequencies in the Private Land Mobile Radio Services pursuant to Part 90 of the Commission's rules -- some of the same frequencies that have been targeted by Little LEO interests for sharing and re-allocation. The principal land mobile radio frequencies used by the railroad industry are 160.215-161.565 MHz, 452.325-452.950 MHz and 457.325-457.950 MHz.[3/] The Little LEO interests have identified these frequencies and others for reallocation to mobile satellite use for uplink transmissions, i.e., 138-174 MHz; 406-420 MHz; 450-512 MHz; 806-821 MHz; 821-824 MHz; 851-856 MHz; and 866 - 869 MHz.[4/]

AAR urges the Commission not to consider use of these bands (or any other land mobile bands) for Little LEO uplink transmissions unless and until it has been demonstrated, through properly conducted sharing studies, that such transmissions will not cause interference to land mobile communications. The various sharing analyses that

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2/ NPRM at ¶78.

3/ 47 C.F.R. §90.91.

4/ FCC Advisory Committee for WRC-97, Informal Working Group - 2A ("IWG 2A"), Document No. 83 (Rev. 1), November 15, 1996.

have been performed to date have not established that such sharing is feasible and that such interference will not occur.

One example of the shortcomings of the "sharing studies" proffered by the Little LEO community may be found in the modeling of land mobile characteristics contained in "Frequency Sharing Between Non-GSO MSS (Narrowband Earth-to-Space Links) and LMS Systems"[5/] in which the analyses were performed using characteristics of mobile transceivers with antenna height products of 10 meters as prescribed in ITU-R Recommendation M. 1039-1.[6/] By limiting the analysis to mobile transceivers, the study ignored completely the increased interference potential to mobile relay stations caused by (1) the higher elevations of such stations (typically up to 200 meters above ground) and (2) the much greater received antenna gain in mobile relay facilities than exists in mobile transceivers. It has been estimated that the result of these factors would be an approximate 30 dB increase in received interference power, a consequence which has been completely ignored by Little LEO interests.[7/] Numerous other deficiencies in the "sharing studies" performed by Little LEO interests are detailed in the Preliminary Report of WRC-97 Informal Working Group 2A.[8/]

The shortcomings of the sharing studies performed by the Little LEO interests have been noted not only in the U.S. internal preparatory proceedings pertaining to WRC-95

5/ Document IWG-2A/59 (Rev. 2); see also Document IWG-2A/83.

6/ Document IWG-2A/83 at 5.

7/ Preliminary Report of Informal Working Group 2A (NGSO/MSS Below 1 GHz). November 22, 1996, at 87.

8/ Id. at 86-89.

and WRC-97, but also by representatives of other nations. Indeed, the severe restrictions on the use of the small amount of additional spectrum allocated for Little LEO use at WRC-95 stand as stark evidence of the international community's lack of confidence in the ability of Little LEO technology to share uplink transmissions with existing terrestrial operations. The Region 2 Little LEO allocations at 455-456 MHz and 459-460 MHz were specifically conditioned by the WRC-95 participants on the limitations of footnotes S5.286A and S5.286B, which state respectively that: "Stations in the mobile-satellite service in the bands 455-456 MHz and 459-460 MHz shall not constrain the development and use of the fixed and mobile services,"[9/] and "Stations in the mobile-satellite service in the bands 455-456 MHz and 459-460 MHz shall not cause harmful interference to, or claim protection from, stations of the fixed or mobile services."[10/] The inclusion of those restrictions was deemed necessary by the Conference because of the absence of any convincing demonstration that interference-free sharing between Little LEO uplinks and existing terrestrial services was possible. That situation has not changed since WRC-95.

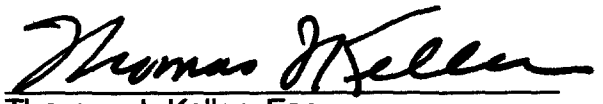
9/ Final Acts of the 1995 World Radio Communications Conference, WRC-95, at 108.

10/ Id.

In conclusion, for the reasons set forth herein, the Commission should exercise extreme caution as it considers assigning any additional frequencies (whether allocated at WRC-95 or under consideration for allocation at WRC-97) for use by Little LEO systems in the U.S.

Respectfully submitted,

ASSOCIATION OF AMERICAN RAILROADS

By: 

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Date: December 20, 1996

CERTIFICATE OF SERVICE

I, Deirdre A. Johnson, a secretary with the law firm of Verner, Liipfert, Bernhard, McPherson and Hand, hereby certify that on this 20th day of December, 1996, a copy of the Comments of the Association of American Railroads to be mailed, first-class, postage prepaid to:

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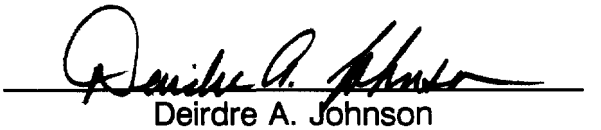

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